International Space Station Operations Architecture Study
Synopsis

With International Space Station (ISS) construction well underway, and program emphasis beginning to shift from development to utilization and operations, NASA sought to obtain an independent recommendation on an operations architecture that would attract the highest quality science to the first permanent, international orbiting laboratory. In January 2000, a contract for an International Space Station Operations Architecture Study was awarded to the Computer Sciences Corporation (CSC) of Fairfax, VA.

CSC assembled a team of prominent space research and operations experts, led by Dr. John Cox, to study current planning for ISS research and operations and to recommend an end-to-end architecture to the NASA Office of Space Flight (OSF). The desired architecture would: provide for as efficient use of the station as possible; make station utilization as simple as possible; ensure the long term health and safety of the station and its crew; and allow NASA to migrate to user-driven utilization over time. The team was tasked with developing and assessing possible architectures and with recommending one that they believed could best achieve OSF and Agency strategic plans. For the option recommended, the team was also tasked to provide a cost-benefit analysis and a recommended acquisition strategy.

The team received briefings and detailed data on ISS operations and research capabilities and plans during visits to NASA Headquarters and the OSF Centers. NASA provided access to information on related initiatives, existing operations contracts, and to key personnel in the ISS Program Office and Center line organizations. After less than 8 months of study and deliberations, the team delivered its final report and recommendations to OSF on August 28, 2000.

Key recommendations in the report include:

- Leveraging NASA's existing field center operations expertise to ensure ISS safety and mission success, continue government liability-risk protection, maintain the public's interests, and maintain the Agency's technical and management skill base;

- Reducing ISS operations costs through competition for operations related services, private sector investment, and partnerships with other federal and state agencies;

- Taking immediate action to establish a Space Station Utilization and Research Institute (SSURI) in Fiscal Year 2001, with the objective of having in place a fully functioning institute in early 2003.

The study team's report supports earlier recommendations made by the National Research Council for the establishment of a non-governmental organization (NGO) for ISS research, and

provides for a fully integrated utilization and operations architecture. Questions regarding this study should be directed to NASA Headquarters Office of Space Flight, Business Management Office, Doug Koupash, (202) 358-2294 or douglas.koupash@hq.nasa.gov.